

Amendments to the Specification

Page 6, after line 3, insert the following new paragraph.

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawings will be provided by the Office upon request and payment of the necessary fee.

Page 12, beginning with line 13, amend the paragraph as follows:

The microfacet generator 201 approximates the shape of the object to be rendered by a set of microfacets (polygons) (step S3). That is, a space is divided into microregions, and the geometrical shape obtained by measurement is re-sampled to acquire a coarse geometrical shape of the object to be rendered. To acquire this coarse geometrical shape, this embodiment adopts, e.g., a method of generating microfacets based on voxel subdivision. The detailed contents are as follows.

Page 15, beginning with line 4, amend the paragraph as follows.

The rendering processor 209 clips selected texture images, and perspective-projects them onto respective microfacets (mapping of texture images: step S6). In this way, rendering that can give perspective, and considers depth ordering, the influence of a light source, and interactions with other objects can be implemented independently of the outer shape of the object to be rendered (step S7).

Page 23, beginning with line 19, amend the paragraph as follows.

As shown in FIG. 9D, microfacets are generated based on a set of voxels each having a 64 x 64 size to approximate the geometrical shape. Note that the colors of the microfacets in FIG. 9D correspond to the numbers of the selected cameras. Texture mapping is executed based on the approximation result in FIG. 9D, and the mapping result is clipped according to the distances, thus obtaining the result shown in FIG. 9E. As can be seen from FIG. 9E, the

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method of the present invention can precisely reconstruct even an ambiguous geometrical shape portion near the object boundary.